

CHAPTER 4—DETERMINING AND REPORTING EMISSIONS

This chapter gives general information about required actual emissions data, acceptable emissions determination methodologies, speciating emissions (categorizing emissions by chemical species), and correctly reporting actual annual emissions, ozone season emissions, and emissions due to emissions events and scheduled maintenance, startup, and shutdown. For more detailed information about determining emissions from internal and external combustion sources, cooling towers, equipment leak fugitives, flares, and marine operations, consult the appropriate technical supplement (Appendix A).

Required Actual Emissions Data

If a site meets the reporting requirements of 30 TAC 101.10(b)(1) and 40 CFR Part 51, all actual emissions for each regulated pollutant must be reported in the emissions inventory. For the purposes of this document, the term regulated pollutant shall include the following:

- any VOC, as defined in 30 TAC 101.1;
- any pollutant subject to federal Clean Air Act (FCAA) Section 111;
- any pollutant listed as a hazardous air pollutant under FCAA Section 112;
- each pollutant a national primary ambient air quality standard has been promulgated for (including carbon monoxide); and
- any other air pollutant subject to requirements under TCEQ rules, regulations, permits, orders of the commission, or court orders.

Non-criteria, regulated pollutants include—but are not limited to—TSP, ammonia, and H₂S.

Acceptable Determination Methodologies

Many different methods exist to determine emissions. In order to promote accuracy and consistency among emissions inventories, the EAS accepts only a limited number of determination methodologies, and further requires that **all** emissions be determined using the best methodology available. Determination methodologies other than those listed as follows may not be employed without the EAS's prior approval. Depending on the type of emission source, the methodology preference will often vary. The acceptable methodologies are discussed in alphabetical order and are labeled with a relevant heading (for example, stack testing is discussed under "Measured Data").

Preceding each heading is a single letter, such as “A” or “V,” the **code** to be entered on the EIQ when using that emissions determination methodology. These codes should be entered on the “Path Emissions” portion of the EIQ under the heading “Method” for **each** reported contaminant. Each contaminant listed on the EIQ can only have **one** corresponding code entered under “Method,” and this code should represent how the emissions of that contaminant were determined.

Source-Specific Determination Methodologies

For information about the preferred emissions determination methodology or methodologies for a specific source type, consult the appropriate technical supplement (Appendix A), or call the EAS help line.

If you believe that a preferred method does not apply to a given facility (or source), or that its use would misrepresent the source’s emissions, contact the EAS for approval of an alternate methodology.

D: Continuous Emissions Monitoring Systems

Continuous emissions monitoring systems (CEMS) generate real-time emissions data 24 hours per day. (Note that portable analyzers are not CEMS.) If CEMS are properly calibrated and operated they offer the best means of determining a source’s emissions. CEMS may be used to determine emissions only if they have been certified according to EPA or TCEQ standards.

Please note that a continuous monitoring system (CMS) that measures the gas composition contained in a process stream (and not the amount of emissions released to the atmosphere) is not a CEMS. Therefore, the emissions determined from CMS would not be coded with a determination methodology of “D” for ‘continuous emissions monitoring system.’ Instead, a determination methodology of “B” for ‘material balance’ would be chosen.

Supply a representative set of summary sheets from Relative Accuracy Test Audits performed during the EI calendar year. If NO_x emissions are determined using CEMS, note the molecular weight used in the data logger. Since the calculation is based on NO₂ by convention, the logger should use a molecular weight of 46.01 to determine NO_x emissions.

If a CEMS is inoperative for any part of the EI calendar year, other data may be used to determine emissions during CEMS downtime, provided that the data substitution method is well documented in your EI submission.

F: Predictive Emissions Monitoring Systems

Predictive emissions monitoring systems (PEMS) predict real-time emissions data continuously. Since correct calibration and operation are critical to system performance, PEMS may be used to determine emissions only if they have been certified according to EPA or TCEQ standards.

Supply a representative set of summary sheets from relative accuracy test audits performed during the EI calendar year. If NO_x emissions are determined using PEMS, provide the molecular weight used in the data logger. As with CEMS, the logger should use a molecular weight of 46.01 to determine NO_x emissions.

If a PEMS is inoperative for any part of the EI calendar year, other data may be used to determine emissions during PEMS downtime, provided that the data substitution method is well documented in your EI submission.

M: Measured Data (Stack Sampling Data)

Stack testing is a formal, structured event coordinated with the appropriate TCEQ regional office. Testing conducted using a portable analyzer, draeger tube, fuel gas analysis, or fuel flow measurement does not qualify as stack testing because the data obtained from these type of testings produce emission rates that are considered engineering estimates.

While properly performed stack testing can provide valuable information about a facility's operation, improperly performed testing may grossly misrepresent a facility's emissions. For this reason, the EAS requires that all stack-test data used to determine emissions be collected using methods approved by the EPA or the TCEQ.

Test stacks during conditions that reflect the actual routine operation of the unit. If a unit is modified, or its operating conditions or associated process parameters change significantly, previous stack test results may no longer accurately reflect the unit's emissions and the EAS may require that a more appropriate method be used to recalculate emissions determinations.

If identical facilities with similar emissions are located at the same site but stack-test data are available for only one of them, the EAS may approve the use of the tested facility's emission factors to determine emissions from the other identical facilities. The EAS will also consider, case by case, the validity of using stack-test emission factors generated for one site to determine emissions from identical facilities in another site. In these cases, only the tested facility's emissions may be coded as "M" for 'measured.' The other related facilities' emissions must be coded as "estimated" because these facilities were not actually tested.

The EAS prefers that stacks be tested during the EI calendar year. However, the use of historical stack-test data is acceptable, provided that the equipment is operating within the same parameters and under the same

conditions that were in place at the time of the test. You may not use stack-test data from a current year to determine emissions for previous years.

By signing the front page of the Emissions Inventory Questionnaire and submitting the document to the EAS, you are certifying that all test data used accurately represent facility emissions.

If you use stack sampling data to determine NO_x emissions, use an NO_x molecular weight of 46.01 when converting from parts per million to a mass emission rate.

V: Vendor-Supplied Emissions Factors

Many industrial equipment manufacturers supply emissions information for their products. These data, based on equipment testing, are developed for a particular piece of equipment and, if applicable, for a particular unit size. Vendor data may be used to determine emissions only if they are based on approved stack testing and if no significant changes have been made to the equipment. A change to a facility or its operation, including a significant change in fuel characteristics, may significantly affect the facility's emissions and therefore invalidate the manufacturer's emissions data.

Include a copy of the manufacturer's data with your supporting documentation. In signing the front page of the EIQ and submitting the document to the EAS, you are certifying that the facility operated in the same manner in which it was tested.

A: AP-42 and Other EPA- or TCEQ-Approved Factors

One method used to determine emissions is the EPA's *Compilation of Air Pollutant Emission Factors*, Volume I: *Stationary Point and Area Sources* (AP-42), with Supplements (updated continually)—available at <http://www.epa.gov/ttn/chief/ap42/index.html>. AP-42 includes brief discussions of various industrial processes, descriptions of these processes' emissions, and emission factors useful for determining these emissions. Equipment emission factors have generally been determined by testing a representative population varying in size and age. **Since this limits the accuracy of determining emissions of these factors, specific equipment factors are preferable to AP-42 factors.**

The EPA is constantly working to improve the quality and quantity of the AP-42 factors. When factors are revised, the new factors wholly replace the older factors. When using a published factor from the EPA or the TCEQ, use the most recent factor as of the end of the calendar year for which the emissions inventory is being prepared. A factor published after the end of the EI calendar year may not be used.

Emissions determined using tools other than AP-42 factors may still be coded with a determination methodology of "A" if the determinations were based on EPA- or TCEQ-approved programs or factors. Examples

include emissions determined using the TANKS and WATER9 software programs, fugitive emissions determined using factors taken from EPA-453/R-95-017, and particulate emissions determined using the abrasive blast cleaning factors from TCEQ's guide to air permits, *Abrasive Blast Cleaning* (publication no. RG-169).

B: Material Balance

Material balance can only be performed for specific types of facilities whose processes are well understood and relatively simple (for example, surface coating or parts cleaning). Emissions determinations must be based on process rates and material quantity and composition. Guidance on determining emissions from several process types may be found in AP-42 or in various TCEQ guides to air permitting, see Appendix D for a list of helpful EPA and TCEQ resources.

Certain methodologies for determining emissions may be labeled “material balance” even if those methodologies incorporate analytical measurements. A TCEQ-approved program for monitoring cooling towers, an extended inlet gas analysis from a glycol still for use in GRI GlyCalc, or a continuous monitoring system used to determine flow rate and composition of gas routed to a flare measures the physical properties of the process stream and does not measure the emissions released to the atmosphere. Therefore, emissions determination methodologies that use such measurements are labeled “B,” since the results of the measurements are used in emissions equations.

S: Scientific Calculation

For emissions inventory, the use of first-order engineering principles (for example, thermodynamic equations or the ideal gas law) constitutes a scientific calculation. Use of process rate data in conjunction with AP-42 or vendor-supplied emission factors, like simple use of a calculator to multiply or add values, does not constitute a “scientifically calculated” emissions determination.

E: Estimation

If the EPA or the TCEQ has not published guidance on determining emissions for a particular process, and if a preferable emissions determination method is not available, you may make an engineering estimate of emissions. Any such estimate must be the best possible, given the available data, and must be accompanied by enough supporting documentation to allow the EAS to logically understand how the estimation was made. **If the EAS determines that an estimation is unfounded, then the EAS may require that emissions determinations be recalculated.**

O: Other

If the EPA or TCEQ has not published emissions determination guidance for a particular process, and if a preferable emissions determination method is not available, it may be acceptable to use factors developed by an industry group. When using such factors, code the associated emissions with a determination methodology of “other.”

Note that certain industry-published software programs, such as GRI GlyCalc or E&P TANK, use emissions determination methodologies that are more appropriately coded with methodologies besides “O.” For example, GRI GlyCalc uses site-specific analytical measurements input into material balance equations to determine glycol still emissions. Therefore, GRI GlyCalc emissions determinations should be coded “B.” Similarly, E&P TANK uses EPA-approved equations (that are also contained in AP-42) to determine tank emissions. Therefore, E&P TANK emissions determinations should be coded “A.”

When using industry group guidance, carefully check emissions determination methodologies to ensure there is no code more appropriate than “O.” Additionally, **if the EAS determines that an emissions determination is unfounded, then the EAS may require that emissions be recalculated.**

Example: A turbine has CEMS installed to measure NO_x and CO. Additionally, formal stack testing, conducted in coordination with the appropriate TCEQ regional office, has measured SO₂ emission rates for this same turbine. CEMS data must be used to determine NO_x and CO actual annual emissions, and these resulting emissions should be coded on the EIQ with a determination methodology of “D.” Since the turbine has no CEMS or PEMS in place to measure SO₂, the data from the stack test mentioned previously must be used to determine SO₂ actual annual emissions; those resulting emissions should be coded “M.” For all other expected contaminants—including, but not limited to, TSP, PM₁₀, PM_{2.5}, and VOC—the best available determination methodologies should be used, and these emissions coded appropriately. For more information on preferred determination methodologies for turbines, please consult “Technical Supplement 1: Select Combustion Sources” in Appendix A.

Minimum Detection Limits

Certain source-specific methods listed in the preceding sections, such as measured data or material balance, use analytical measurements to determine emissions. Analytical test methods can indicate that measurements of a contaminant likely to be present in an emissions stream are below the analytical method’s minimum detection limit. However, such a finding is **not equivalent** to a finding that the contaminant is absent from the emissions stream. Therefore, if measurements of a contaminant likely to be in an emissions stream are below the minimum detection limit

(that is, non-detected), then half of the detection limit must be used to determine the emissions of the contaminant, unless otherwise specified by permit condition, TCEQ or federal rule, or commission order.

General Order of Preference

If a source-specific order of preference for determination methodologies does not exist for a given facility (see technical supplements in Appendix A), then you should follow the general order of preference listed in Table 4-1.

Table 4-1. General Order of Preference for Emissions Determination Methodologies (to Be Used *Only* in the Absence of Source-Specific Guidance)

<p>D (Continuous emissions monitoring system or CEMS) F (Predictive emissions monitoring system or PEMS) M (Measured—stack test data) V (Vendor-supplied emissions factors) A (AP-42 and other EPA-approved factors) B (Material balance) S (Scientifically calculated) E (Estimated) O (Other)</p>
--

Using Factors from a Permit

Do **not** list a permit as a factor's source. If you use the same factor to determine emissions for your inventory as you used to apply for your permit, then tell us where that factor originated (for example, vendor data or AP-42). You may not use the factor from your permit if any of the following applies:

- If your permit factor came from a document such as AP-42, then you must use the most recent version of that factor. If you believe that a previous factor more accurately represents facility emissions, explain your reasoning in the cover letter you submit with your emissions inventory. The EAS will review your request.
- If you have conducted testing or implemented continuous monitoring since your permit was issued, you must use the resulting data. If you believe that the data used to apply for your permit more accurately represent facility emissions, explain your reasoning in the cover letter you submit with your emissions inventory. The EAS will review your request.
- If your permit no longer reflects the conditions of a facility's actual operations.

Rates reported on the EIQ should **represent actual emissions**, rather than maximum potential emissions.

Speciating Emissions

Once you have determined the emissions from each facility at the site, you may need to specifically identify and quantify the individual chemical substances, or species, within each emission category. This process, known as *speciation*, is particularly important when reporting emissions of volatile organic compounds (VOCs). This section offers only a brief overview of speciation requirements. For more information about emissions speciation for a particular source, consult the appropriate technical supplement (Appendix A), or contact the EAS.

Speciating VOCs

VOC speciation requirements depend on a site's geographic location. If the site lies in El Paso County or east of 100° longitude (see map on page 9), then speciate the VOCs from each source emitting at least 5 tons of VOCs annually. If it lies west of 100° longitude (except for El Paso County), then speciate the VOCs from each source emitting at least 25 tons of VOCs annually.

In either case, speciate VOC emissions to at least 90 percent of the total VOC emissions reported for each facility. If any speciated contaminant was emitted at a level below 0.1 ton, you may report that contaminant under *VOC—unclassified* (contaminant code 50001).

Each emitted substance (for example, carbon monoxide or benzene) must be identified by a unique five-digit number known as the contaminant code. It is very important that each emission rate be reported under the most accurate contaminant code available. For example, benzene should be reported under the benzene-specific code (52420) rather than under the general VOC code (50001).

For a complete list of contaminant codes, consult *2007 Emissions Inventory Forms and Instructions* (RG-360B). This document can be found on the EAS web page at <www.tceq.state.tx.us/goto/ieas>. The EAS attempts to ensure that the contaminant code list is complete and accurate. If you cannot locate a particular contaminant code, contact the EAS for assistance. If possible, be prepared to provide the compound's Chemical Abstracts Service (CAS) number to aid in identification. Note that the contaminant code 50000, unspciated hydrocarbons, **is no longer in use**.

To obtain a VOC—unclassified (contaminant code 50001) total, subtract all speciated VOCs from the total VOC number. Note that the EAS no longer requires explicit reporting of total VOC emissions under contaminant code 59999. The following example should clarify VOC reporting requirements.

Example: A fugitive area located east of 100° longitude emitted 10 tons of VOCs. Based on the VOC weight percentages obtained using a site gas analysis, you determined that the released contaminants were:

- propane (60%)
- butane (8%)
- isobutane (7%)
- pentane (7%)
- isopentane (6%)
- hexane (4%)
- heptane (3%)
- individual VOCs occurring in such small amounts that they cannot reasonably be separated (5%)

You report these emissions as shown in Table 4-2:

Table 4-2. Example of Speciated VOC Emissions

Contaminant Code	Contaminant	Actual Emissions (tpy)
50001	VOC—unclassified	0.5
56775	propane	6.0
56725	butane	0.8
56625	isobutane	0.7
56750	pentane	0.7
56700	isopentane	0.6
56600	hexane	0.4
56575	heptane	0.3

Notice that the total VOC emissions of 10 tons are not explicitly shown in your report. The STARS database will automatically sum the reported VOCs for each source to obtain the total VOC number (previously reported under contaminant code 59999). **Do not** report the total 10 tons of VOC emissions under contaminant code 50001 and then report the speciated emissions shown in Table 4-2, because STARS will then arrive at a total VOC emission rate of 19.5 tons for this facility, resulting in an overreporting of 9.5 tons of emissions.

Speciating Hazardous Air Pollutants and Other Compounds of Interest

Speciate all hazardous air pollutants (HAPs), particularly if they were emitted from any facility (source) at or above 0.1 ton per year. Give special consideration to determining and reporting mercury emissions. The TCEQ is requesting that all regulated entities report mercury emissions from any facility (or source), especially those whose emissions exceed 0.001 ton of mercury per year.

In a nonattainment county, speciate each of the following chemicals, particularly if they were emitted from any facility at or above 0.1 ton:

- ethylene;
- propylene;
- isoprene;
- all butenes (butylenes), especially 1,3-butadiene;
- all pentenes;
- all trimethylbenzenes;
- all xylenes; and
- all ethyltoluenes.

For certain chemical mixtures such as condensate or gasoline, quantify and speciate the HAPs, list each HAP under the appropriate contaminant code, and then report the balance of the emissions under the chemical mixture's contaminant code, such as 59090 (for condensate) or 59003 (for gasoline). For speciation guidance on other complex contaminants, contact the EAS.

Speciating Particulate Matter

TSP, PM₁₀, and PM_{2.5}

Particulate matter is a collective term used for any material, except uncombined water, that exists as a solid or liquid in the atmosphere or in a gas stream at standard conditions. While individual particles cannot be seen with the naked eye, collectively they can appear as black soot, dust clouds, or grey hazes.

Total suspended particulate (TSP) matter refers to all particulate matter except uncombined water. However, particles can range in size from several hundred microns to thousandths of a micron. Since a particle's transport characteristics and its potential health effects may depend on its size, the EPA has promulgated national primary and secondary air quality standards concerning two subsets of fine (small) particulate matter: PM₁₀ and PM_{2.5}. Thus, emissions of PM₁₀ and PM_{2.5} are required to be reported

on the emissions inventory. This section will assist you in reporting PM_{10} and $PM_{2.5}$ emissions on the EIQ.

PM_{10} is defined as the portion of TSP that has an aerodynamic diameter less than or equal to 10 microns. Therefore, PM_{10} is a subset of TSP by definition. Most TSP emissions are composed of a certain percentage of PM_{10} ; that is, a certain percentage of TSP emissions comprises particles less than 10 microns in diameter, while the remaining percentage comprises larger particles. Therefore, when reporting TSP emissions, also report PM_{10} emissions, unless the facility can document that all TSP emissions are greater than 10 microns in diameter.

$PM_{2.5}$ is defined as the portion of TSP that has an aerodynamic diameter less than or equal to 2.5 microns. Therefore, $PM_{2.5}$ is a subset of TSP and PM_{10} by definition. For many sources, $PM_{2.5}$ constitutes a certain percentage of TSP emissions. For example, sources that combust natural gas emit particulate matter less than 1 micron in diameter. Thus, all particulate matter emitted from natural gas combustion is not only $PM_{2.5}$ (since it is smaller than 2.5 microns in diameter), but also TSP and PM_{10} , since $PM_{2.5}$ is a subset of TSP and PM_{10} by definition.

Particle-Size Distribution

The percentages of PM_{10} and $PM_{2.5}$ that constitute a source's TSP emissions are often referred to as a *particle-size distribution*. Source-specific, EPA-approved testing is the best method available to determine particle size distribution for a particular emissions source (facility). If test data are not available, process knowledge—including manufacturers' data—may help you determine a source's particle-size distribution. AP-42 also contains particle-size distributions for certain sources.

Reporting and Speciating Particulate Matter

When reporting particulate matter emissions, report all such emissions, regardless of size, as TSP under the 10000 series of contaminant codes. Since TSP is defined as all particulate matter (that is, there are no size restrictions on TSP), even the portion of TSP that is PM_{10} and $PM_{2.5}$ should be reported under the 10000 contaminant code series. Similarly, all particles with an aerodynamic diameter less than or equal to 10 microns should be reported as PM_{10} under the 20000 contaminant code series, even if a portion of these particles can be considered $PM_{2.5}$. Note that, since PM_{10} and $PM_{2.5}$ are subsets of TSP, representing particulate matter as TSP, PM_{10} , and $PM_{2.5}$ does not result in repeated counting of the emissions.

To speciate particulate matter, follow these guidelines:

- report all speciated particulate emissions under the appropriate 1xxxx contaminant code;
- list the remaining unspeciated particulate emissions under the contaminant code 10000;
- report the portion of the particulate emissions with an aerodynamic diameter of 10 microns or less (PM_{10}) under a 2xxxx contaminant code;
- report the portion of the particulate emissions with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$) under the contaminant code 39999.

Example: A facility emitted 10 tons of particulate matter. The matter is determined to have been mostly phosphorus (75 percent) and zinc (16 percent), with the remaining 9 percent being of unknown composition. The phosphorus and zinc particles are larger than 2.5 microns in aerodynamic diameter but smaller than 10 microns in aerodynamic diameter. The other 9 percent of particles are believed to be larger than 10 microns in aerodynamic diameter. The emissions in this example should be reported as follows:

Table 4-3. Example of Speciated Particulate Matter Emissions

Contaminant Code	Contaminant	Actual Emissions (tpy)
10000	Part—unclassified	0.9
14460	phosphorus	7.5
14780	zinc	1.6
20000	PM_{10} —unclassified	0
24460	PM_{10} phosphorus	7.5
24780	PM_{10} zinc	1.6
39999	total $PM_{2.5}$	0

Notice that the total particulate number (10 tons) and the total PM_{10} number (9.1 tons) are not explicitly listed in this report. Once again, the STARS database will sum all of the appropriate individual contaminants to obtain these numbers. Verify that the sum of the emission rates reported in the entire 10000 series of contaminants represents the intended total particulate emission rate, and that the sum of the emission rates reported in the entire 20000 series of contaminants represents the intended total PM_{10} emission rate.

Reporting Emissions

Before entering emission rates on the EIQ, you must distinguish annual emissions from those resulting from emissions events or scheduled maintenance, startup, and shutdown activities. Then, depending on the site's location, you may need to determine the daily emission rates for the summer months. Once you have done all of this, you will be ready to report your emissions in your inventory.

Annual Emissions

These include all of a facility's emissions, including authorized emissions from maintenance, startup, and shutdown activities. It does not include emissions that are defined in 30 TAC 101.1 as emissions events or scheduled maintenance, startup, and shutdown activities. Determine and speciate annual emissions according to the guidance in this chapter and the technical supplements.

Ozone Season Emissions

If the regulated entity is located in El Paso County or east of 100° longitude (see Table 4-4 for these counties), then you will need to determine average daily release rates during the ozone season—the period from June 1 through August 31. Report ozone season emissions, in units of pounds per day (PPD), under the “Ozone” heading on the Path Emissions portion of the EIQ. **The EAS database can no longer automatically calculate ozone rates.**

For each FIN/EPN path, use actual process and/or emissions data gathered during the summer months to determine total ozone season emission rates. For example, for a combustion source, determine total ozone season emissions contaminant by contaminant from the amount of fuel burned from June 1 through August 31. For sources (facilities) equipped with CEMS, determine total ozone season emissions from CEMS data gathered from June 1 through August 31.

For each FIN/EPN path, quantify every contaminant's total ozone season emissions (in pounds). Do **not** include emissions events or scheduled maintenance, startup, and shutdown emissions in total ozone season emissions. Next, for each FIN/EPN path, determine how many days the facility emitted through this emission point during the ozone season. Then use the following equation to determine the FIN/EPN path's PPD emissions rates:

$$E_{\text{ozone rate}} = \frac{E_{\text{ozone total}} (\text{lbs})}{\text{Operation Days}_{\text{ozone}}}$$

Where:

$E_{\text{ozone rate}}$ = PPD (pounds per day) ozone rate for one contaminant

$E_{\text{ozone total}}$ = total ozone season emissions rate for one contaminant, in **lbs**

$\text{Operation Days}_{\text{ozone}}$ = number of days FIN/EPN path operated during ozone season; **not to exceed 92**

$\text{Operation Days}_{\text{ozone}}$ in the above formula will vary, depending upon a facility's operating schedule. If the associated facility has a consistent weekly operating schedule, then ozone emissions can be calculated using the actual number of days operated during the ozone season. Ensure that the facility's operating schedule on the EIQ has been updated with data for the current year.

However, if a facility does not operate consistently during the summer months, then ozone season emissions data should be averaged over 92 days (that is, enter "92" for $\text{Operation Days}_{\text{ozone}}$ in the above formula) to avoid unusually large ozone emissions.

For example, an emergency generator or fire pump is tested quarterly but otherwise remains idle. During the one day July test, the unit emits 1000 pounds of NO_x. However, these emissions should **not** be reported as 1000 pounds per day for one day per week, four weeks per year. Rather, they should be averaged over the 92 days of the ozone season and the operating schedule should remain 24 hours per day, seven days per week, 52 weeks per year (the actual number of number of operating hours can be represented in the field "Annual Operating Hours").

If a facility's inconsistent operating schedule produces unusually large ozone season emissions, or if an EIQ source operated during the summer months, but specific ozone season emissions data are not available to determine PPD rates, please contact the EAS for assistance.

Table 4-4. Counties for Which Ozone Season Daily Rates Must Be Reported

Note: The EAS database is no longer capable of automatically calculating ozone rates.

Anderson	Duval	Karnes	Red River
Angelina	Eastland	Kaufman	Refugio
Aransas	El Paso	Kendall	Robertson
Archer	Ellis	Kenedy	Rockwall
Atascosa	Erath	Kerr	Runnels
Austin	Falls	Kimble	Rusk
Bandera	Fannin	Kleberg	Sabine
Bastrop	Fayette	Knox	San Augustine
Baylor	Foard	La Salle	San Jacinto
Bee	Fort Bend	Lamar	San Patricio
Bell	Franklin	Lampasas	San Saba
Bexar	Freestone	Lavaca	Shackelford
Blanco	Frio	Lee	Shelby
Bosque	Galveston	Leon	Smith
Bowie	Gillespie	Liberty	Somervell
Brazoria	Goliad	Limestone	Starr
Brazos	Gonzales	Live Oak	Stephens
Brooks	Grayson	Llano	Tarrant
Brown	Gregg	Madison	Taylor
Burleson	Grimes	Marion	Throckmorton
Burnet	Guadalupe	Mason	Titus
Caldwell	Hamilton	Matagorda	Travis
Calhoun	Hardeman	McCulloch	Trinity
Callahan	Hardin	McLennan	Tyler
Cameron	Harris	McMullen	Upshur
Camp	Harrison	Medina	Uvalde
Cass	Haskell	Menard	Van Zandt
Chambers	Hays	Milam	Victoria
Cherokee	Henderson	Mills	Walker
Clay	Hidalgo	Montague	Waller
Coleman	Hill	Montgomery	Washington
Collin	Hood	Morris	Webb
Colorado	Hopkins	Nacogdoches	Wharton
Comal	Houston	Navarro	Wichita
Comanche	Hunt	Newton	Wilbarger
Concho	Jack	Nueces	Willacy
Cooke	Jackson	Orange	Williamson
Coryell	Jasper	Palo Pinto	Wilson
Dallas	Jefferson	Panola	Wise
DeWitt	Jim Hogg	Parker	Wood
Delta	Jim Wells	Polk	Young
Denton	Johnson	Rains	Zapata
Dimmit	Jones	Real	Zavala

Emissions Events (EE)

Report emissions events separately under the “EE” column on the “Path Emissions” portion of the EI, instead of reporting total annual emissions from all emissions events and scheduled maintenance, startup, and shutdown activities in the “EE/SMSS” column.

In this “EE” column, report the total annual emissions in tons from all releases due to emissions events, regardless of whether those releases represent reportable or nonreportable quantities and regardless of whether an affirmative defense is claimed for those emissions. For more information, consult 30 TAC 101.1 and 101.201.

For guidance on interpreting rules concerning emissions events, contact the TCEQ’s Air Section manager for the region where the regulated entity is located.

Excess Opacity Events

Emissions that result from excess opacity events need to be quantified and reported in the emissions inventory. However, the excess opacity event itself cannot be reported in terms of percent opacity in the EI. Rather, the emissions associated with the event must be calculated and reported in the “Emissions Event” column as a mass quantity (in terms of tons), using the best emissions determination method available, such as process knowledge, past engineering analysis, or testing.

Certification Statement

Under Texas Health and Safety Code 382.015(f), an owner or operator of a regulated entity that experienced no emissions events during the relevant calendar year and that is required to submit an annual emissions inventory must include as part of the inventory a statement that the regulated entity experienced no emissions events during the reporting year.

If the owner or operator notified the TCEQ, in accordance with 30 TAC 101.201, about an EE that also resulted in an excess opacity event, the event should be included in the total reportable EEs, the emissions should be included in the “EE” column at the FIN/EPN path level, and the EE certification should not be signed.

If the owner or operator notified the TCEQ in accordance with 30 TAC 101.201 about **only** an excess opacity event where there were emissions below the reportable quantity for each contaminant, the event should be included in the number of excess opacity events, the emissions should be included in the “EE” column at the FIN/EPN path level, and the EE certification should not be signed.

If the owner or operator notified the TCEQ in accordance with 30 TAC 101.201 about **only** an excess opacity event where there were no

emissions being emitted; the opacity event should be included in the number of excess opacity events and the EE certification should be signed.

Scheduled Maintenance, Startup, and Shutdown (SMSS) Activities

Report scheduled maintenance, startup, and shutdown emissions separately under the “SMSS” column on the “Path Emissions” portion of the EIQ, instead of reporting total annual emissions from all emissions events and scheduled maintenance, startup, and shutdown activities in the “EE/SMSS” column.

In the “SMSS” column, report the total annual emissions in tons from all releases due to scheduled maintenance, startup, and shutdown activities that are not authorized by a new source review permit or permit by rule, regardless of whether those releases represent reportable or nonreportable quantities and regardless of whether an affirmative defense is claimed for those emissions. For more information, consult 30 TAC 101.1 and 101.211. Emissions from maintenance, startup, and shutdown activities that are authorized under a permit or permit by rule should not be included in the “SMSS” column. Instead, report these emissions in the annual emissions column.

For guidance on interpreting rules concerning scheduled maintenance, startup, and shutdown activities, contact the TCEQ’s Air Section manager in the region where the regulated entity is located.

Special Note: “EE/SMSS” Column

As outlined in the previous section, emissions from emissions events and SMSS activities must be reported in either the “EE” or the “SMSS” column, as appropriate. **A regulated entity that reports emissions in the “EE/SMSS” (totals) column must also report emissions in the “EE” or “SMSS” column (or both), as appropriate.**